



# Rare Plant Inventory for Point Reyes National Seashore

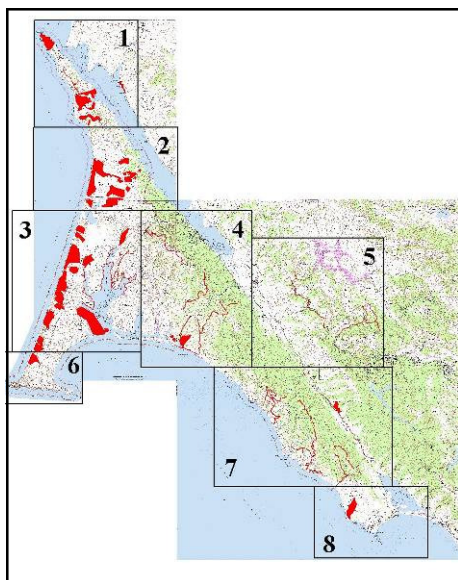
**Importance:** *Point Reyes National Seashore (PORE) hosts over 900 species of flowering plants, representing approximately 16% of the plant species known to occur in California. This diverse flora includes 48 rare plant species.*

Successful management of rare plant species requires comprehensive information describing their abundance and distribution. Prior to 2001, this information was unknown or incomplete for many rare species within PORE. In August of 2001, the California Native Plant Society (CNPS) published the sixth edition of their Inventory of Rare and Endangered Plants of California, and with it, a number of new species were added to the Seashore's rare plant list. Around the same time, the park acquired a number of new land parcels that required detailed floristic surveys. In addition, nearly 20 years had passed since the last systematic rare plant survey (although CNPS volunteers had identified 146 new locations of rare plant species over 18 years). Recognizing the need for a comprehensive survey, resource staff initiated the search for undocumented rare plant populations within the Seashore in 2001.



**Humboldt Bay owl's clover, a rare species, was added to the PORE plant list upon its discovery in PORE during the NPS rare plant inventory.**

**Inventory Methods:** *The National Park Service (NPS) conducted rare plant field surveys between March and September of 2001 through 2004, timed to coincide with the blooming period of target species.*



**Figure 1. NPS staff and volunteers surveyed areas (marked in red) throughout the Seashore. (Numbered boxes used only for data organization.)**

Prior to conducting field surveys, NPS completed an assessment of all rare plants known, or with potential, to occur within the Seashore. Staff carefully reviewed plant occurrence records and developed a prioritized list of rare plant species. Habitats with potential to support rare species were identified using the park vegetation map, aerial photographs, and the past experience of CNPS members, local botanists, and resource management staff.

High-priority species included those with potential to occur within the Seashore, species newly listed in the CNPS Sixth Inventory of Rare and Endangered Plants of California, federal or state listed species, species with little known information, and locally rare or "high-risk" species. High-priority areas included those not visited before, newly acquired land parcels, and areas with planned management activities.

NPS staff created schedules with all rare plant species sorted by blooming period (month or season) and habitat type. Field surveys were then conducted by "sweeping" through the survey area and by focusing searches in areas that contained suitable habitat for target rare plant species. Surveyors documented and mapped all rare plant occurrences they encountered using a standard data sheet and a GPS unit.

Resource managers also developed a “Rare-Plant-A-Thon” to involve the public in the search and to manage the task of surveying over 71,000 acres of potential habitat. Approximately 350 volunteers logged 2,300 volunteer hours identifying rare plants in six Rare-Plant-A-Thons conducted between 2001 and 2004.

**Inventory Findings: 145**  
*previously unrecorded rare plant populations (Table 1) were documented and mapped, bringing the total number of rare plant populations in PORE up to 435, an increase of 34%.*

Two new rare species were added to the plant list: the CNPS-listed and former federal species of concern (this status has since been eliminated) Humboldt Bay owl’s clover (*Castilleja ambigua* ssp. *humboldtiensis*) and coastal bluff morning glory (*Calystegia purpurata* ssp. *saxicola*). The Rare-Plant-A-Thons identified 67 of the new occurrences and one of the PORE plant list additions. In total, NPS staff and volunteers surveyed 4,346 acres (1,760 ha) of potential habitat during the inventory effort.

As of 2004, four plant species in PORE appeared on the federally endangered list, one was listed as state endangered, 33 were formerly listed as federal species of concern, and an additional ten species were listed as rare by the CNPS. The effort

to obtain accurate and complete information describing the abundance and distribution of rare plants within the Seashore is ongoing. As plant species are listed, park projects proposed, and new lands acquired, the need for rare plant survey work to inform management decisions to protect and preserve the plants continues.

## Additional Resources:

Coppoletta, M. and M. Skaer, 2004. Point Reyes National Seashore Rare Plant Inventory Report. Online: [http://science.nature.nps.gov/im/units/sfan/Inventory/FinalInventoryReports/PORE\\_RPlant04\\_FinalRpt\\_PUBLIC.pdf](http://science.nature.nps.gov/im/units/sfan/Inventory/FinalInventoryReports/PORE_RPlant04_FinalRpt_PUBLIC.pdf).

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**Table 1. Rare plant occurrences (locations where plants were found) documented in 2001-2004 PORE Rare Plant Inventory.**

Species	Number of new occur-
*federally endangered	
<i>Abronia umbellata</i> ssp. <i>breviflora</i> /Pink sand-verbena	5
<i>Agrostis blasdalei</i> /Blasdale's bentgrass	4
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> */Sonoma alopecurus	1
<i>Arabis blepharophylla</i> /Coast rock cress	1
<i>Arctostaphylos virgata</i> /Marin manzanita	3
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> /Coastal marsh milk-vetch	10
<i>Calystegia purpurata</i> ssp. <i>saxicola</i> /Coastal bluff morning-glory	7
<i>Castilleja ambigua</i> ssp. <i>humboldtiensis</i> /Humboldt Bay owl's clover	1
<i>Ceanothus gloriosus</i> var. <i>gloriosus</i> /Point Reyes ceanothus	2
<i>Cirsium andrewsii</i> /Franciscan thistle	4
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i> /Point Reyes bird's beak	10
<i>Elymus californicus</i> /California bottlebrush grass	13
<i>Fritillaria affinis</i> var. <i>tristulis</i> /Marin checker lily	11
<i>Fritillaria liliaceae</i> /Fragrant fritillary	1
<i>Gilia capitata</i> ssp. <i>chamissonis</i> /Dune gilia	6
<i>Gilia millefoliata</i> /Dark-eyed gilia	6
<i>Grindelia hirsutula</i> var. <i>maritima</i> /San Francisco gumplant	2
<i>Hesperexax sparsiflora</i> var. <i>breviflora</i> /Short-leaved exax	1
<i>Lasthenia macrantha</i> var. <i>macrantha</i> /Perennial goldfields	6
<i>Layia carnosa</i> */Beach layia	1
<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i> /Point Reyes meadowfoam	1
<i>Linanthus rosaceus</i> /Rosy linanthus	11
<i>Lupinus tidestromii</i> */Tidestrom's lupine	3
<i>Microseris paludosa</i> /Marsh microseris	2
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i> /Gairdner's yampah	2
<i>Polygonum marinense</i> /Marin knotweed	13
<i>Ranunculus lobbii</i> /Lobb's aquatic buttercup	5
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i> /Point Reyes checkerbloom	3
<i>Stellaria littoralis</i> /Beach starwort	5
<i>Triphysaria floribunda</i> /San Francisco owl's clover	5
<b>Total</b>	<b>145</b>